

Our Reference: SEA-147-D

PATENT

AF  
IPW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thomas R. Tudor  
Serial Number: 10/023,333  
Filing Date: December 12, 2001  
Examiner/Group Art Unit: Robert M. Fetsuga/3751  
Title: VISCOUS MATERIAL DISPENSE SYSTEM

CERTIFICATE OF MAILING AND TRANSMITTAL LETTER

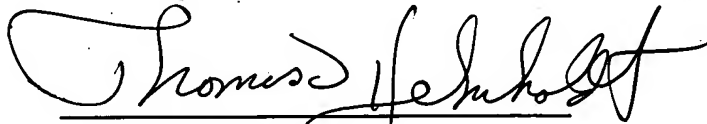
Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

Transmitted with this document is a Postcard and a Revised Appeal Brief in triplicate in the above-identified application.

- ☒ No fee required
- ☒ Please charge any deficiency or credit any excess in the enclosed fees to Deposit Account Number 25-0115.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, on January 23, 2006.

  
Thomas D. Helmholdt  
Attorney for Applicant  
Registration No. 33,181  
(248) 649-3333

YOUNG & BASILE, P.C.  
3001 West Big Beaver Road,  
Suite 624  
Troy, MI 48064-3107



Our Reference: SEA-147-D

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thomas R. Tudor and William C. Paetow II  
Serial Number: 10/023,333  
Filing Date: December 12, 2001  
Examiner/Group Art Unit: Fetsuga, Robert M./3751  
Title: VISCOUS MATERIAL DISPENSE SYSTEM

**REVISED APPEAL BRIEF**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Please enter the following Appeal Brief in the appeal filed December 16, 2002.

**REAL PARTY IN INTEREST**

Sealant Equipment and Engineering, Inc., a corporation duly organized and existing under the laws of the State of Michigan and having a principal place of business at 45677 Helm Street, Plymouth, MI 48170.

**RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences in the present application.

**STATUS OF CLAIMS**

Claims 1-6, 8-18, and 20-22 are pending and appealed in the application. Claims 7 and 19 have been cancelled and are no longer pending in the application. Claims 1, 4, 9, and 14 are no longer rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification. The term "monolithic" in association with the tube member and with the insert was

**Date January 23, 2006**

**Reply to Notification of Non-Compliant Appeal Brief dated December 23, 2005**

asserted to be new matter. The term "monolithic" has been removed from claims 1, 2, 4, 9, and 14 in an After Final Amendment filed November 15, 2005 to simplify the issues for appeal. The After Final Amendment was entered January 5, 2006. Claims 4, 6, and 21 are rejected under 35 U.S.C. §102(e) as being anticipated by Brennan et al (U.S. Patent No. 6,138,872). Claims 4-5, 8-10, 12-17, and 20-22 were not amended in the After Final Amendment dated December 16, 2002, and now stand rejected for the FIRST TIME in the Final Rejection dated May 23, 2005 under 35 U.S.C. §102(b) as being anticipated by Miller (U.S. Pat. No. 5,397,180). Applicant's have had no previous opportunity to respond to this particular rejection. Claims 1-6, 8-18, and 20-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Brennan et al (U.S. Patent No. 6,138,872), Miller (U.S. Patent No. 5,397,180), and Keller et al (U.S. Patent No. 5,478,150). The language of the current claims on appeal is attached as Appendix A after entry of the After Final Amendment filed November 15, 2005 and entered on January 6, 2006.

#### STATUS OF AMENDMENTS

The After Final Amendment submitted August 23, 2005 in the present application was not entered. A Second After Final Amendment submitted November 14, 2005 was entered, eliminating the rejections under 35 U.S.C. §112, first paragraph. All other amendments in the present application have been entered. A Pre-Appeal Brief Review Request was filed and a Pre-Appeal Brief Response was received indicating that the application should proceed to the Board of Patent Appeals and Interferences.

#### SUMMARY OF THE CLAIMED SUBJECT MATTER

Mix tube 14 (Figs. 2, 4, 8, 9) is formed of a suitable material and includes a single piece, tube member 24 (as best seen in Fig. 9), and a plurality of mix elements 26 and 28 comprising alternating left and right hand helical elements positioned in stacked fashion within tube member 24. (Paragraph [0026], lines 1-4) The upper end of tube member 24 defines a large mouth mounting portion 24a and

**Date January 23, 2006**

**Reply to Notification of Non-Compliant Appeal Brief dated December 23, 2005**

stepped at 24c to allow the tube member to be selectably clipped at a selected step to selectably vary the size of the discharge opening of the tube member. (Paragraph [0026], lines 4-8) Mix tube 14 may comprise, for example, a tube assembly available from ConProTec, Inc. of Salem, New Hampshire under the tradename "STATOMIX"®. (Paragraph [0026], lines 8-10).

Dispensing means, such as tip insert or nozzle insert, hereinafter referred to as single piece, insert 16 (as best seen in Fig. 8) is formed of a suitable material and is shaped and configured to fit within the lower end 24b of tube member 14 with a conical external surface or main body portion 16a of the insert positioned within an inner conical nozzle surface or conical bore 24e defined within the lower end 24b of the tube member with an outwardly extending annular flange or upper flange portion 16b of the insert seating on an inwardly extending annular shoulder 24d defined by the tube member at the intersection of the main body portion of the tube member and the lower end 24b of the tube member. (Paragraph [0027], lines 1-7)

In the assembled relation of the various components of the viscous material dispense system, insert 16 is positioned in the lower nozzle tip end 24b of tube member 24 with flange 16b seating on annular shoulder 24d, mixer shroud 18 is positioned telescopically within mix tube 14, and the lower end 16c of the insert 16 is positioned proximate the mouth or discharge opening 22e of the dispense tip. (Paragraph [0031], lines 1-18).

A tubular nozzle member or hollow tubular housing 24 has one end for receiving viscous material for passage through the nozzle member. (Paragraph [0034.1], lines 1-2). The hollow tubular housing 24 has a first end and a second end for carrying viscous material therebetween, and a nozzle-retaining surface adjacent one end of the tubular housing. (Paragraph [0034.1], lines 2-4). A nozzle insert 16 can be engagable with the nozzle-retaining surface within the tubular housing. (Paragraph [0034.1], lines 5-6). The nozzle insert can extend beyond an end of the tubular housing for discharging viscous material. (Fig. 8). The nozzle insert can

Date January 23, 2006

Reply to Notification of Non-Compliant Appeal Brief dated December 23, 2005

have a non-linear axially extending inner surface defining a passage therethrough with an aperture of reduced dimension adjacent an outlet end for discharging a viscous material from the tubular housing through the nozzle insert. (Paragraph [0034.1], lines 6-9). The nozzle insert 16 can have a first aperture at one end and a second aperture at another end. (Paragraph [0034.1], lines 9-10). The first aperture can be larger than the second aperture and can be disposed opposite from the nozzle-retaining surface of the tubular housing. (Paragraph [0034.1], lines 10-12). The nozzle insert can have an aperture at an outer end smaller than the second end of the tubular member. (Figs. 2 and 8). A cylindrical passage portion of the nozzle insert can be located adjacent the second aperture. (Paragraph [0034.1], lines 12-13). A static mixer 14 is operably insertable within the hollow tubular housing 24 for trapping the nozzle insert 16 against the nozzle-retaining surface 24d. (Paragraph [0034.1], lines 13-15). The static mixer can be engageable with the radially outwardly extending flange of the nozzle insert. (Figs. 2 and 8). The nozzle insert 16 has an inner surface with a beveled-angular cut adjacent a first end and has a cylindrical surface portion extending longitudinally at least partially between the first end and a second end of the nozzle insert 16. (Paragraph [0034.1], lines 15-18). The nozzle insert 16 has an axially extending passage therethrough with an entry portion of the passage having an angular surface in communication with a cylindrical surface extending along at least a portion of the passage. (Paragraph [0034.1], lines 18-20).

#### ISSUES ON APPEAL

1. Are claims 4, 6, and 21 patentable under 35 U.S.C. §102(e) over an anticipation rejection based on Brennan et al?

Appellant answers: Yes

Examiner answers: No

2. Are claims 4-5, 8-10, 12-17, and 20-22 patentable under 35 U.S.C. §102(b) over an anticipation rejection based on Miller, which rejection was

Date January 23, 2006

Reply to Notification of Non-Compliant Appeal Brief dated December 23, 2005

raised for the first time in the Final Rejection dated May 23, 2005, when claims 4-5, 8-10, 12-17, and 20-22 were not amended in the prior response?

Appellant answers: Yes

Examiner answers: No

3. Are claims 1-6, 8-18, and 20-22 patentable under 35 U.S.C. §103(a) over an obviousness rejection based on Brennan et al, Miller, and Keller et al?

Appellant answers: Yes

Examiner answers: No

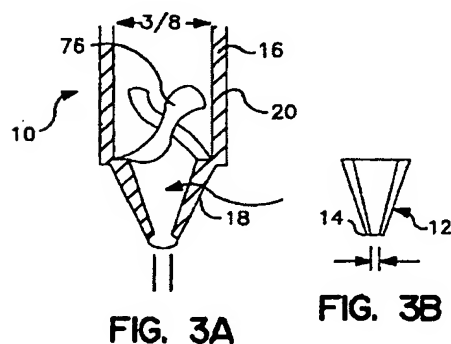
#### GROUPING OF CLAIMS

Claims 14 and 17 rise and fall together. The remaining claims 1-6, 8-13, 15-16, 18, and 20-22 stand and fall independently of one another for the reasons stated in detail in the argument.

#### ARGUMENT

##### ISSUE 1

Claims 4, 6, and 21 stand rejected under 35 U.S.C. §102(e) as being anticipated by Brennan et al. Brennan et al discloses a standard static mixer 16, where the static mixer shroud 20 contains mix elements 26 and a cone-shaped insert



BRENNAN et al  
(Pat. No. 6,138,872)

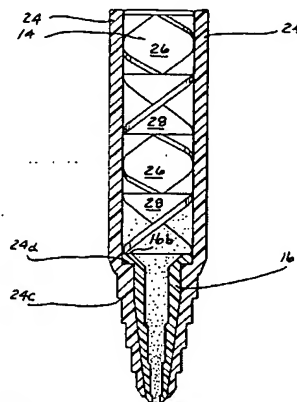


FIG-8  
(Partial)  
S.N. 10/023,333

Date January 23, 2006

Reply to Notification of Non-Compliant Appeal Brief dated December 23, 2005

12. (See column 2, lines 18-22). Claims 4, 6, 21 of the present application recite a hollow tubular housing having a first end and a second end for carrying viscous material therebetween, and a nozzle-retaining annular shoulder surface adjacent one end of the tubular housing, and a nozzle insert engagable with the nozzle-retaining annular shoulder surface within the tubular housing, where the nozzle insert has a non-linear axially extending inner surface defining a passage therethrough with an aperture of reduced dimension adjacent an outlet end for discharging a viscous material from the tubular housing through the nozzle insert. This specific structural configuration is not anticipated, taught or rendered obvious by Brennan et al. The Brennan et al reference does not anticipate, teach, or suggest a nozzle retaining annular shoulder surface adjacent one end of the tubular housing as recited in claim 4, and/or a nozzle insert engagable with the nozzle-retaining annular shoulder surface within the tubular housing as recited in claim 4. The Examiner refers to the nozzle-retaining annular shoulder surface (as receiving insert 12); however this is a conical surface (not an annular shoulder surface) formed at one end of the static mixer tube housing 16. ( See column 2, line 3 of Brennan et al). The cone-shaped insert 12 slides through the standard mixer tube 16 and rests against the conical surface formed adjacent the discharge end 18 of the tube 16. The static mixer tube 16 of Brennan et al does not have a nozzle-retaining annular shoulder as recited in claims 4. In fact, Figure 3A of Brennan et al illustrates that the internal mixer element is received against the annular shoulder of Brennan et al, not the insert itself. This teaches away from the configuration as claimed in the present application. Therefore, Brennan et al does not anticipate, teach, or suggest a static mixer operably insertable within the hollow tubular housing for trapping an annular shoulder of the nozzle insert against the nozzle-retaining annular shoulder surface as recited in claim 6. The cone-shaped insert 12 of Brennan et al rests on the inner conical surface of the discharge end 18 of the static mixer tube 16. Brennan et al does not anticipate, teach, or suggest the nozzle insert being an interchangeable insert positionable within the second end of the tubular member against the nozzle-retaining annular shoulder

Date January 23, 2006

Reply to Notification of Non-Compliant Appeal Brief dated December 23, 2005

surface of the static mixer tube as recited in claim 21 of the present application.

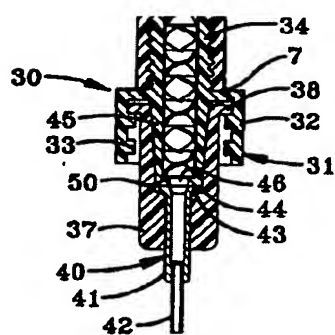
Brennan et al only teaches that the cone-shaped insert 12 rests against the conical surface 18 formed in the discharge end of the static mixer tube 16. The static mixer tube 16 does not have a nozzle-retaining annular shoulder and the cone-shaped insert 12 does not have an annular flange to rest thereon. Since the cone-shaped insert 12 does not have an annular flange, the insert of Brennan et al cannot be trapped against an annular shoulder of the tube 16 by mix elements 26. In fact, Brennan et al teaches away from an annular flange on the insert 12 and teaches away from trapping the annular flange of the insert 12 between the nozzle-retaining annular shoulder surface of the tubular housing 16 and the mixer elements 26 as recited in claims 4, 6, and 21 of the present application. Therefore, the Examiner's rejection of claims 4, 6, and 21 as being anticipated by Brennan et al under 35 U.S.C. §102(e) is improper and is reversible error.

## ISSUE 2

Claims 4-5, 8-10, 12-17, and 20-22 stand rejected under 35 U.S.C.

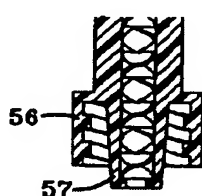
§102(b) as being anticipated by Miller. This rejection is raised for the first time in

the office action dated May 23, 2005.

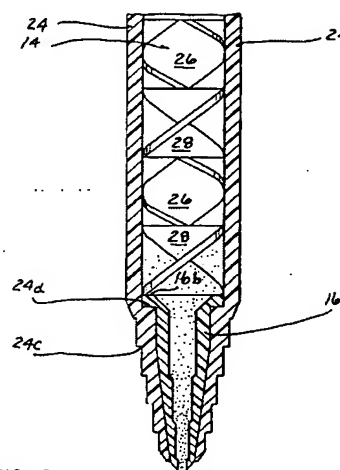


**FIG-4**

(Partial)  
MILLER  
(Pat. No. 5,397,180)



**FIG-5**



**FIG-8**

(Partial)  
S.N. 10/023,333

Since this rejection is applied to claims that were



Date January 23, 2006

Reply to Notification of Non-Compliant Appeal Brief dated December 23, 2005

not amended in the prior response, the Examiner was requested to withdraw the finality of the office action and to issue a new non-final office action to allow the appellant sufficient opportunity to address the new grounds of rejection raised for the first time in the last final office action. Alternatively, the Examiner was requested to specifically cite the MPEP section relied on to permit withdrawal of a final rejection in order to change the ground of rejection from §102(b) to §102(e) for the Brennan et al reference, while also adding a new ground of rejection based on §102(b) applying the Miller reference, while issuing a final office action on claims that have not been amended. These requests were not answered and a Pre-Appeal Brief Review was requested to correct this procedural error. The Pre-Appeal Brief Review response indicated that the case should proceed to appeal to the Board of Appeals and Interferences. Accordingly, Appellant points out that the Miller reference does not anticipate teach or suggest the invention as recited in claims 4-5, 8-10, 12-17, and 20-22. In particular, Miller states in column 4, line 44-51, that the dispensing needle assembly 40 includes a hollow cylindrical body 41 preferably formed of metal which is molded within the interior of an outer wing block connector 37 and has a hollow cylindrical dispensing tip 42 extending from the body 41, where the needle body 41 terminates in an outturned top end flange 43 which abuts against an end wall 44 of tapered male luer lock outlet nozzle 45. (Emphasis added). Claim 4 of the present application requires a tubular nozzle member and a nozzle insert engagable with a nozzle-retaining annular shoulder surface within the tubular housing, the nozzle insert having a nonlinear axially extending inner surface defining a passage therethrough with an aperture of reduced dimension adjacent the outlet. This specific structure is not anticipated, taught or suggested by the Miller reference, taken singularly or in any permissible combination. In particular, the tube 2 of Miller is not single piece, since it requires connector 37. The tube 2 of Miller does not include an inwardly extending annular shoulder and/or an inner conical nozzle surface for engagement with the nozzle insert as recited in claim 4. The dispensing needle assembly 40 of Miller is not a nozzle insert as required by claim 4. The dispensing

Date January 23, 2006

Reply to Notification of Non-Compliant Appeal Brief dated December 23, 2005

needle assembly 40 of Miller does not have an outwardly extending flange engagable with the inwardly extending shoulder of the tubular member as recited in claims 9 and 14. Claim 5 recites that the insert has a cylindrical passage portion adjacent the second aperture. The Miller reference does not disclose an insert as claimed. Claims 8 and 20 recite that the insert has an inner surface with an beveled-angular cut adjacent a first end and a cylindrical surface portion extending longitudinally at least partially between the first end and a second end of the insert. The Miller reference does not disclose an insert as claimed. The Miller needle assembly 40 is attached externally to the tube, not inserted within the tube as claimed. Claim 9 recites a hollow tubular housing having a first end and a second end for carrying viscous material therebetween, and a nozzle-retaining annular shoulder surface extending radially inwardly adjacent one end of the tubular housing, and a nozzle insert having a radially outwardly extending annular flange adjacent a first end, the radially outwardly extending annular flange engagable with the nozzle-retaining annular shoulder surface within the tubular housing, the nozzle insert for discharging a viscous material from the tubular housing through the nozzle insert. This specific structural configuration is not anticipated, taught, or rendered obvious by the Miller reference. The Miller reference does not anticipate, teach or suggest an annular shoulder extending radially inwardly adjacent one end of the hollow tubular housing, and/or a radially outwardly extending annular flange adjacent a first end of the nozzle insert engagable with the annular shoulder. Claim 10 recites that the insert has a cylindrical passage portion extending longitudinally adjacent the second aperture of the insert. The Miller reference does not disclose an insert with the claimed configuration. Claim 12 recites that the insert extends beyond the one end of the tubular housing. The Miller reference does not disclose an insert meeting the limitations of the claimed configuration. Claim 14 recites a tubular member having first and second ends, the second end having an internal insert-retaining annular shoulder surface, and an axially extending portion of the tubular member interconnecting said first and second ends, and a nozzle insert engageable within the

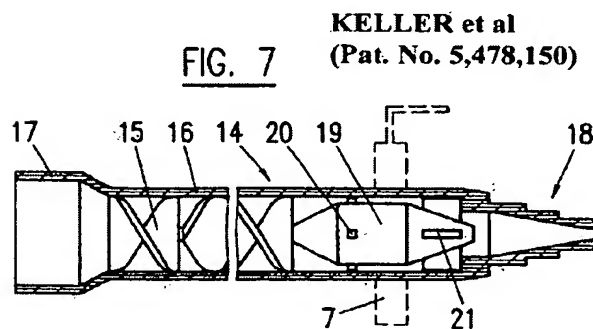
Date January 23, 2006

Reply to Notification of Non-Compliant Appeal Brief dated December 23, 2005

interconnecting said first and second ends, and a nozzle insert engageable within the second end of the tubular member and having an outwardly extending annular flange engageable with the annular shoulder within the tubular member, the nozzle insert extending outwardly beyond the second end of the tubular member for discharging viscous material. This specific structural configuration is not anticipated, taught, or rendered obvious by the Miller reference. The Miller reference does not anticipate, teach or suggest the tubular member having an internal insert-retaining annular shoulder surface, and/or an outwardly extending annular flange of the nozzle insert engageable with the annular shoulder. Claim 15 of the present application recites that the nozzle insert includes an interchangeable tip portion insertable into the end of the tubular nozzle member and against the internal insert-retaining surface. The Miller reference does not anticipate, teach, or suggest a nozzle insert including an interchangeable tip portion insertable into the tubular nozzle member for reasons given in more detail above. The Miller reference teaches in Column 4, lines 44-48, that dispensing needle assembly 40 includes a cylindrical body 41, and a hollow cylindrical dispensing tip 42 extending from the body 41. Claim 16 recites that the insert has an entry point of the passage with an angular surface in communication with a cylindrical surface extending along at least a portion of the passage. The Miller reference does not teach an insert meeting the claimed structural limitations. The dispensing tip 42 of the multi-part dispensing nozzle assembly 40 of Miller is not interchangeable as recited in claims 21-22. Accordingly, the Examiner's rejection of claims 4-5, 8-10, 12-17, and 20-22 as being anticipated by Miller is reversible error.

ISSUE 3

Claims 1-6, 8-18, and 20-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Brennan et al, Keller et al, and Miller. The Brennan et al, Keller et al, and Miller references, taken singularly or in any permissible combination, do not anticipate, teach, or suggest the present invention as recited in claims 1-6, 8-18, and 20-22. Brennan et al. discloses a standard static mixer tube 16, where the static mixer shroud 20 contains mix elements 26 and a cone shaped insert 12. (See column 2, lines 18-22). Claim 1 of the present application recites a tubular nozzle member having one end for receiving viscous material for passage through the nozzle member, a nozzle tip portion having an inwardly extending annular shoulder with an inner conical nozzle surface extending from the annular shoulder toward an opposite end of the nozzle member, and an axially extending main body tubular portion interconnecting the one end and the nozzle tip portion, the tubular nozzle



member having an external surface with radially inwardly stepped reductions in dimension approaching an end of the nozzle tip portion providing guides for selectively cutting variable discharge opening sizes, and a nozzle insert having an outwardly

extending flange adjacent a first end and a conical external surface extending toward a second end, where the annular flange of the nozzle insert is engageable against the annular shoulder of the tubular nozzle member within the tubular nozzle member proximate the nozzle tip portion of the nozzle member and operative for discharging viscous material. This specific structural configuration is not anticipated, taught or rendered obvious by Brennan et al, and/or Keller et al, and/or Miller, taken singularly or in any permissible combination. The addition of the Keller et al reference to Brennan et al and/or Miller does not overcome the deficiencies of the Brennan et al

Date January 23, 2006

Reply to Notification of Non-Compliant Appeal Brief dated December 23, 2005

and/or Miller references previously described in detail above. In particular, the Keller et al reference teaches an externally stepped housing, but does not teach a nozzle insert with an outwardly extending flange engagable with an inwardly extending shoulder of the tubular nozzle member as recited in claims 1-6, 8-18, and 20-22. These elements are also not anticipated, taught, or rendered obvious by Brennan et al and/or Miller in any permissible combination.

Furthermore, the Miller reference can not be properly combined with either the Brennan et al. reference and/or the Keller et al. reference, since to do so would destroy the teaching of the multi-part housing inherent in the Miller disclosure. Miller states in column 4, line 44-51, that the dispensing needle assembly 40 includes a hollow cylindrical body 41 preferably formed of metal which is molded within the interior of an outer wing block connector 37 and has a hollow cylindrical dispensing tip 42 extending from the body 41, where the needle body 41 terminates in an outturned top end flange 43 which abuts against an end wall 44 of tapered male luer lock outlet nozzle 45. (Emphasis added). In the configuration illustrated by Miller, the mixer element 48 is spaced from the top end flange 43 by end wall 44 of nozzle 45. Therefore, the Miller reference does not teach or suggest trapping the flange 43 of an insert (or an insert assembly) against the nozzle-retaining annular shoulder surface with the mixer element as recited in claims 6, 11, and 18 of the present application.

Claim 4 of the present application requires a tubular nozzle member and a nozzle insert engagable with a nozzle-retaining annular shoulder surface within the tubular housing, the nozzle insert having a nonlinear axially extending inner surface defining a passage therethrough with an aperture of reduced dimension adjacent the outlet. This specific structure is not anticipated, taught or suggested by the Brennan et al reference, the Keller et al reference, and/or the Miller reference, taken singularly or in any permissible combination. In particular, the tube 2 of Miller requires connector 37. The tube 2 of Miller does not include an inwardly extending annular shoulder and/or an inner conical nozzle surface for engagement with the

nozzle insert as recited in claim 4. The dispensing needle assembly 40 of Miller does not have an outwardly extending flange engagable with the inwardly extending shoulder of the tubular member 2 as recited in claim 4.

The Miller reference can not be properly combined with the Keller et al. and/or the Brennan et al. references without destroying the teaching of a multi-part tube inherent in the Miller reference, and/or without destroying the inherent teaching of Keller et al that no insert is required, and/or without destroying the inherent teaching of Brennan et al that the insert does not require an annular flange and the inherent teaching of Brennan et al that the insert is not trapped between the nozzle-retaining annular shoulder surface and the mixer element as recited in the claims of the present application.

The addition of the Miller reference to the combination of Brennan et al in view of Keller et al does not anticipate, teach or suggest a static mixer trapping the nozzle insert against the nozzle-retaining annular shoulder surface as recited in claims 6, 11 and 18, since Miller teaches that the end wall 44 of the tapered male luer locking nozzle is interposed between the flange 43 and the outlet end 50 of the mixing element 48. (See Fig. 4 of Miller and column 4, lines 48-51 and column 5, lines 2-5).

The dispensing tip 42 of the multi-part dispensing nozzle assembly 40 of Miller is not interchangeable as recited in claims 2, 15, and 21-22. Claim 2 recites that the nozzle insert includes an interchangeable tip portion insertable into the end of the tubular nozzle member. The Brennan et al. reference does not anticipate, teach or suggest an interchangeable tip portion and/or the tip portion extending beyond the end of the tubular nozzle member. The addition of the Keller et al. reference does not overcome this deficiency. The Keller et al. reference does not anticipate teach or suggest an interchangeable tip portion insertable into the end of the tubular nozzle member. The addition of the Miller reference does not overcome the deficiency of the combination of Brennan et al. and Keller et al. The Miller reference does not anticipate, teach or suggest a nozzle insert including an interchangeable tip portion

insertable into the end of the tubular nozzle member for the reasons given in detail above. Furthermore, the Miller reference can not be properly combined with the Brennan et al. and/or the Keller et al. references, since the Miller reference teaches away from the requirement of a tubular nozzle member and there would be no motivation for those skilled in the art to combine the references in the manner asserted by the Examiner. In addition, the proposed combination can not be properly made, since the combination would destroy the teaching of a multi-part tubular nozzle member inherent to the disclosure of the Miller reference, and/or the inherent teaching that inserts are not required in Keller et al, and/or the inherent teaching that inserts do not require an annular flange to be trapped between nozzle-retaining annular shoulder surfaces and the mixer elements as taught by the cone-shaped inserts of Brennan et al. The Brennan et al reference does not disclose a nozzle insert having an outwardly extending annular flange engagable against a nozzle-retaining annular shoulder of the tubular housing, and/or a static mixer operably insertable within the hollow tubular housing for trapping the annular shoulder of the nozzle insert against the nozzle-retaining annular shoulder surface of the tubular housing.

The Examiner asserts that Brennan does not disclose a flange, however that in view of Miller it would have been obvious to one of ordinary skill in the art at the time the invention was made to associate a flange 43 of Miller with the Brennan et al insert 12 in order to facilitate securement, and to combine Keller et al to associate stepped reductions of tip portion 18 with the Brennan tube member. The addition of the Keller et al reference to the Brennan et al reference does not overcome the deficiencies of Brennan et al as discussed in detail above. The Miller reference discloses a tube member 2 including a dispensing needle assembly 40 having a needle 41 with a flange 43. However, the assembly of Miller is a multi-piece dispensing needle assembly 40 including a hollow cylindrical body 41, a hollow cylindrical dispensing tip 42, and locking connector 37. There is no motivation for combining the multi-piece assembly of Miller with a one-piece insert of Brennan et al. The multi-piece insert assembly of Miller would not slidably fit within the static

mixer tube of Brennan et al. The combination of references does not anticipate, teach, or suggest the nozzle insert having an annular flange as recited in the claims of the present invention. The Miller reference cannot be properly combined with either the Brennan et al, reference or the Keller et al, reference since to do so would destroy the teaching of the multi-part housing inherent in the Miller disclosure. The combination of Brennan et al, Keller et al, and Miller does not anticipate, teach, or suggest a nozzle insert that extends beyond the end of the nozzle tip portion of the tubular nozzle member. Miller discloses a multi-piece nozzle insert, and also discloses a multi-piece tube. The mixer tube 4 of Miller requires the attachment of locking connector 37 formed with a tapered upward interior 47 to be assembled together for the mixer to function according to the disclosure.

Claim 2 of the present application recites that the nozzle insert includes an interchangeable tip portion insertable into the end of the tubular nozzle member and extends beyond an end of the nozzle tip portion of the tubular member. The Brennan et al, reference does not anticipate, teach, or suggest an interchangeable tip and/or the tip portion extending beyond an end of the tubular nozzle member. The addition of the Keller et al, reference does not overcome this deficiency. The Keller et al, reference does not anticipate, teach, or suggest an interchangeable tip insertable into the end of the tubular nozzle member. In addition, the Miller reference does not overcome the deficiency of Brennan et al, and Keller et al. The Miller reference does not anticipate, teach, or suggest a nozzle insert including an interchangeable tip portion insertable into the tubular nozzle member for reasons given in more detail above. Furthermore, the Miller reference cannot be properly combined with Brennan et al, and/or the Keller et al, references since the Miller reference teaches away from the requirement of an insertable nozzle within mixer tube housing 4 and there would be no motivation for those skilled in the art to combine the references in this way. In addition, the proposed combination cannot be properly made, since the combination would destroy the multi-part tubular nozzle member inherent in the disclosure in the Miller reference. The Miller reference



teaches in column 4, lines 44-48, that dispensing needle assembly 40 includes a cylindrical body 41 molded within the interior of an outer winged locking connector 37 for connection to the mixer tube housing 4.

Claim 3 of the present application recites that the insert has an inner surface with an entry point having an angular cut funnel shaped surface portion and a cylindrical surface portion. The Brennan et al reference does not anticipate, teach or suggest this specific structural configuration, since it only discloses a conical inner surface. The addition of Keller et al does not overcome this deficiency, since Keller does not disclose the use of any insert. The further addition of Miller does not overcome the deficiency of the combination of Brennan et al and Keller et al, since Miller does not disclose an insert engageable within the mixer tube housing 4. The Miller reference teaches in column 4, lines 44-48, that dispensing needle assembly 40 includes a cylindrical body 41 molded within the interior of an outer winged locking connector 37 for attachment to the mixer tube housing 4. There is no teaching or suggestion of combining the references as suggest by the Examiner, except for the disclosure of the present invention itself.

Claim 5 recites that the insert has a cylindrical passage portion adjacent the second aperture. The Brennan et al reference does not anticipate, teach or suggest this specific structural configuration, since it only discloses a conical inner surface. The addition of Keller et al does not overcome this deficiency, since Keller does not disclose the use of any insert. The further addition of Miller does not overcome the deficiency of the combination of Brennan et al and Keller et al, since Miller does not disclose an insert engageable within the mixer tube housing 4. The Miller reference teaches in column 4, lines 44-48, that dispensing needle assembly 40 includes a cylindrical body 41 molded within the interior of an outer winged locking connector 37 for attachment to the mixer tube housing 4. There is no teaching or suggestion of combining the references as suggest by the Examiner, except for the disclosure of the present invention itself.

Claims 8, 13 and 20 recite that the insert has an inner surface with an beveled-angular cut adjacent a first end and a cylindrical surface portion extending longitudinally at least partially between the first end and a second end of the insert. The Brennan et al reference does not anticipate, teach or suggest this specific structural configuration, since it only discloses a conical inner surface. The addition of Keller et al does not overcome this deficiency, since Keller does not disclose the use of any insert. The further addition of Miller does not overcome the deficiency of the combination of Brennan et al and Keller et al, since Miller does not disclose an insert engageable within the mixer tube housing 4. The Miller reference teaches in column 4, lines 44-48, that dispensing needle assembly 40 includes a cylindrical body 41 molded within the interior of an outer winged locking connector 37 for attachment to the mixer tube housing 4. There is no teaching or suggestion of combining the references as suggest by the Examiner, except for the disclosure of the present invention itself.

Claim 10 recites that the insert has a cylindrical passage portion extending longitudinally adjacent the second aperture of the insert. The Brennan et al reference does not anticipate, teach or suggest this specific structural configuration, since it only discloses a conical inner surface. The addition of Keller et al does not overcome this deficiency, since Keller does not disclose the use of any insert. The further addition of Miller does not overcome the deficiency of the combination of Brennan et al and Keller et al, since Miller does not disclose an insert engageable within the mixer tube housing 4. The Miller reference teaches in column 4, lines 44-48, that dispensing needle assembly 40 includes a cylindrical body 41 molded within the interior of an outer winged locking connector 37 for attachment to the mixer tube housing 4. There is no teaching or suggestion of combining the references as suggest by the Examiner, except for the disclosure of the present invention itself.

Claims 12 and 14 recite that the insert extends beyond the one end of the tubular housing. The Brennan et al reference does not anticipate, teach or suggest this specific structural configuration, since it only discloses a cone-shaped insert

within the end of the static mixer tube. The addition of Keller et al does not overcome this deficiency, since Keller does not disclose the use of any insert. The further addition of Miller does not overcome the deficiency of the combination of Brennan et al and Keller et al, since Miller does not disclose a insert engageable within the mixer tube housing 4. The Miller reference teaches in column 4, lines 44-48, that dispensing needle assembly 40 includes a cylindrical body 41 molded within the interior of an outer winged locking connector 37 for connection to the mixer tube housing 4. There is no teaching or suggestion of combining the references as suggest by the Examiner, except for the disclosure of the present invention itself.

Claim 16 recites that the insert has an entry point of the passage with an angular surface in communication with a cylindrical surface extending along at least a portion of the passage. The Brennan et al reference does not anticipate, teach or suggest this specific structural configuration, since it only discloses a conical inner surface. The addition of Keller et al does not overcome this deficiency, since Keller does not disclose the use of any insert. The further addition of Miller does not overcome the deficiency of the combination of Brennan et al and Keller et al, since Miller does not disclose an insert engageable within the mixer tube housing 4. There is no teaching or suggestion of combining the references as suggest by the Examiner, except for the disclosure of the present invention itself.

Therefore, the Examiner's rejection of claims 1-6, 8-18, and 20-22 under 35 U.S. C. §103(a) based on the combination of Brennan et al, Keller et al, and Miller is improper and is reversible error.

### CONCLUSION

At best, the prior art references show components in bits and pieces of the inventive arrangement as claimed in the independent claims. The relevant art recognizes many components and concepts within its domain. Upon close investigation and scrutiny of the diverse practices in this art and its peripheral technical fields of endeavor, a fact-finder is inevitably led to the conclusion that

Date January 23, 2006

Reply to Notification of Non-Compliant Appeal Brief dated December 23, 2005

artisans can and could produce a myriad of devices and functions of apparently endless diversity from components and concepts already individually recognized as belonging to the prior art. Such speculation must not cloud the standards for the evaluation of patentability over the prior art under 35 U.S.C. §§102 and 103. Properly focused, the issues center on what would have been anticipated, or obvious to one of ordinary skill in the art at the time of the invention. Obviousness is tested by what the combined teaching of the references would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). But it cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. See ACS Hosp. Sys. Inc. v. Montefiore Hosp., 732 F.2d 1572, 515 F.2d 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). And teachings of references can be combined only if there is some suggestion or incentive to do so. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596, 1599 (Fed. Cir. 1988). Approaches to obviousness determinations which focus merely on identifying and tabulating missing elements in hindsight retrospect imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, and, fall victim to the insidious effect of hindsight syndrome wherein that which only the inventor taught is used against its teacher. W. L. Gore & Assoc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 312-3 (Fed. Cir. 1983). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. In re Fine, 5 USPQ2d, at 1600.

For the reasons stated above, it is respectfully submitted that Appellants' invention as set forth in claims 1-6, 8-18, and 20-22 patentably define over the cited references. As such, it is respectfully submitted that the Examiner's final rejection of the claims 1-6, 8-18, and 20-22 is erroneously based and the reversal of the objections of claims 1-6, 8-18, and 20-22 is respectfully requested.

**Application S.N. 10/023,333**

**Page 20 of 20**

**Date January 23, 2006**

**Reply to Notification of Non-Compliant Appeal Brief dated December 23, 2005**

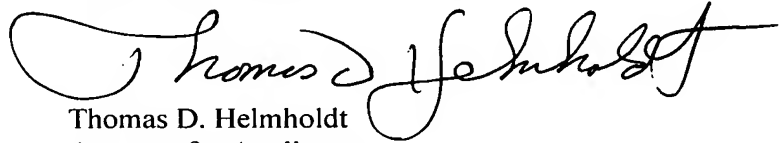
Applicants attorneys previously paid the amount of \$130.00 to cover the Appeal Brief filing fee. No additional payment is required.

No oral hearing is requested.

This Appeal Brief is being filed in triplicate including one original and two copies.

Respectfully submitted,

YOUNG, BASILE, HANLON, MacFARLANE,  
WOOD & HELMHOLDT, P.C.

A handwritten signature in black ink, appearing to read "Thomas D. Helmholdt", written in a cursive style.

Thomas D. Helmholdt  
Attorney for Applicants  
Registration No. 33181  
(248) 649-3333

3001 West Big Beaver Rd., Suite 624  
Troy, Michigan 48084-3107

Date: January 23, 2006  
TDH/TMS/jml

## **APPENDIX INDEX**

<b>CLAIMS APPENDIX: APPENDIX A .....</b>	<b>A1-A5</b>
<b>EVIDENCE APPENDIX .....</b>	<b>None</b>
<b>RELATED PROCEEDINGS APPENDIX .....</b>	<b>None</b>

## **APPENDIX A**

1. An apparatus for dispensing a viscous material comprising:  
a tubular nozzle member having one end for receiving viscous material for passage through the nozzle member, a nozzle tip portion having an inwardly extending annular shoulder with an inner conical nozzle surface extending from the annular shoulder toward an opposite end of the nozzle member, and an axially extending main body tubular portion interconnecting the one end and the nozzle tip portion, the tubular nozzle member having an external surface with radially inwardly stepped reductions in dimension approaching an end of the nozzle tip portion providing guides for selectively cutting variable discharge opening sizes; and

a nozzle insert having an outwardly extending annular flange adjacent a first end and a conical external surface extending toward a second end, the annular flange of the nozzle insert engageable against the annular shoulder within the tubular nozzle member proximate the nozzle tip portion of the nozzle member and operative for discharging viscous material.

2. The apparatus of claim 1, wherein the nozzle insert further comprises an interchangeable tip insert insertable into the tubular nozzle member, said tip insert having a smaller end aperture than the nozzle tip portion and extending beyond an end of the nozzle tip portion of the tubular nozzle member.

3. The apparatus of claim 2, wherein the tip insert has an inner surface with an entry point having an angular cut funnel shaped surface portion and a cylindrical surface portion.

4. An apparatus for dispensing a viscous material comprising:  
a hollow tubular housing having a first end and a second end for carrying viscous material therebetween, and a nozzle-retaining annular shoulder surface adjacent one end of the tubular housing; and

a nozzle insert engagable with the nozzle-retaining annular shoulder surface within the tubular housing, the nozzle insert having a non-linear axially extending inner surface defining a passage therethrough with an aperture of reduced dimension adjacent an outlet end for discharging a viscous material from the tubular housing through the nozzle insert.

5. The apparatus of claim 4 further comprising:

the nozzle insert having a first aperture at one end and a second aperture at another end, wherein the first aperture is larger than the second aperture and is disposed opposite from the nozzle-retaining surface of the tubular housing, and a cylindrical passage portion adjacent the second aperture.

6. The apparatus of claim 4 further comprising:

a static mixer operably insertable within the hollow tubular housing for trapping the nozzle insert against the nozzle-retaining surface.

7. (Cancelled).

8. The apparatus of claim 4 further comprising:

the nozzle insert having an inner surface with a beveled-angular cut adjacent a first end and having a cylindrical surface portion extending longitudinally at least partially between the first end and a second end of the nozzle insert.

9. An apparatus for dispensing a viscous material comprising:

a hollow tubular housing having a first end and a second end for carrying viscous material therebetween, and a nozzle-retaining annular shoulder surface extending radially inwardly adjacent one end of the tubular housing; and

a nozzle insert having a radially outwardly extending annular flange adjacent a first end, the radially outwardly extending annular flange engagable with the nozzle-retaining annular shoulder surface within the tubular housing, the nozzle insert for discharging a viscous material from the tubular housing through the nozzle insert.



10. The apparatus of claim 9 further comprising:  
the nozzle insert having a first aperture at one end and a second aperture at another end, wherein the first aperture is larger than the second aperture and is disposed opposite from the nozzle-retaining surface of the tubular housing, and a cylindrical passage portion adjacent the second aperture.

11. The apparatus of claim 9 further comprising:  
a static mixer operably insertable within the hollow tubular housing and engageable with the radially outwardly extending annular flange of the nozzle insert for trapping the nozzle insert against the nozzle-retaining surface.

12. The apparatus of claim 9 further comprising:  
the nozzle insert having at least a cylindrical surface portion of a passage extending axially therethrough with a first opening adjacent one end larger than a second opening adjacent an opposite end, and the nozzle insert extending beyond the one end of the tubular housing.

13. The apparatus of claim 9 further comprising:  
the nozzle insert having an inner passage with a beveled-angular cut surface adjacent a first end and having a cylindrical portion extending at least partially between the first end and a second end of the nozzle insert.

14. An apparatus for dispensing a viscous material comprising:  
a tubular member having first and second ends, the second end having an internal insert-retaining annular shoulder surface, and an axially extending portion of the tubular member interconnecting said first and second ends; and  
a nozzle insert engageable within the second end of the tubular member and having an outwardly extending annular flange engageable with the annular shoulder within the tubular member, the nozzle insert extending outwardly beyond the second end of the tubular member for discharging viscous material.

15. The apparatus of claim 14 further comprising the nozzle insert being an interchangeable insert positionable within the second end of the tubular member against the internal inserting-retaining surface, the insert having a smaller aperture at an outer end than the second end of the tubular member.

16. The apparatus of claim 14 further comprising the nozzle insert having an axially extending passage therethrough, an entry portion of the passage having an angular surface in communication with a cylindrical surface extending along at least a portion of the passage.

17. The apparatus of claim 14 further comprising:  
the nozzle insert having a first aperture at one end and a second aperture at another end, wherein the first aperture is larger than the second aperture and is disposed opposite from the insert-retaining surface of the tubular member.

18. The apparatus of claim 14 further comprising:  
a static mixer operably insertable within the tubular member for trapping the nozzle insert against the internal insert-retaining surface.

19. (Cancelled).

20. The apparatus of claim 14 further comprising:  
the nozzle insert having an inner passage with a beveled-angular cut portion adjacent a first end and having a cylindrical portion extending along at least partially between the first end and a second end of the nozzle insert.

21. The apparatus of claim 4 further comprising the nozzle insert being an interchangeable insert positionable within the second end of the tubular member against the nozzle-retaining annular shoulder surface, the insert having a smaller aperture at an outer end than the second end of the tubular member.

22. The apparatus of claim 9 further comprising the nozzle insert being an interchangeable insert positionable within the second end of the tubular member against the nozzle-retaining annular shoulder surface, the insert having a smaller aperture at an outer end than the second end of the tubular member.